

Amendments to the Claims

Please amend the claims as indicated in the following listing of the claims, which replaces all prior versions of the claims in the application.

1. (Currently Amended) A system for servoing on a moving target within a dynamic scene, comprising:

a master variable pointing camera system;

a plurality of slave variable pointing camera systems, wherein the slave variable pointing camera systems and the master variable pointing camera system are positioned around the scene;

a master control unit in communication with the master variable pointing camera system for determining, based on parameters of the master variable pointing camera system and mapping data between the master variable pointing camera system and the slave variable pointing camera systems, parameters for each of the slave variable pointing camera systems such that, at a point in time, the master variable pointing camera system and the slave variable pointing camera systems are aimed at the target and a size of the target in an image from each of the master variable pointing camera system and the slave variable pointing camera systems is substantially the same; and

a plurality of slave camera control units in communication with the master control unit, wherein each slave camera control unit is for controlling at least one of the slave variable pointing camera systems based on the parameters for each of the slave variable pointing camera systems,

wherein the mapping data includes:

data regarding the geometric relationship of the camera systems to the scene;

data regarding the relationship between the zoom and the angular field of view for each camera system; and
data regarding the relationship between the focus and the depth of field for each camera system.

2. (Original) The system of claim 1, wherein the parameters of the master variable pointing camera system and the parameters for the slave variable pointing camera systems include pointing parameters and optical parameters.

3. (Original) The system of claim 2, wherein:
the master variable pointing camera system includes a master pan/tilt camera system; and
the plurality of slave variable pointing cameras includes a plurality of slave pan/tilt camera systems.

4. (Original) The system of claim 3, wherein the wherein the parameters of the master variable pointing camera system and the parameters for the slave variable pointing camera systems include pan, tilt, zoom and focus parameters.

5. (Original) The system of claim 2, further comprising a video image sequence generator in communication with the master control unit and the slave camera control units.

6. (Original) The system of claim 5, wherein the video image sequence generator is for generating a video image sequence of the target by outputting an image from certain of the master variable pointing camera system and the slave variable pointing camera systems in sequence according to the position of the master variable pointing camera system and the slave variable pointing camera systems around the scene.

7. (Original) The system of claim 5, further comprising a computer vision control unit in communication with the master control unit and the master variable pointing camera system.

8. (Original) The system of claim 5, further comprising a remote operator interface unit in communication with the master control unit and the master variable pointing camera system.

9. (Original) The system of claim 5, wherein the master control unit includes:
a target determination module for determining a position of the target within the scene and a size of the target at the position in an image from the master variable pointing camera system based on the parameters of the master variable pointing camera system; and
a slave control module in communication with the target determination module for determining the parameters for each of the slave variable pointing camera systems based on the position of the target and the size of the target in the image from the master variable pointing camera system.

10-27. Cancelled.

28. (Currently Amended) A method for servoing on a moving target within a dynamic scene, comprising:
reading parameters of a first variable pointing camera system;
determining parameters for a plurality of other variable pointing camera systems based on the parameters of the first variable pointing camera system and mapping data for the camera systems, wherein the first variable pointing camera system and the plurality of other variable pointing camera systems are positioned around the scene, such that, at a point in time, each of the variable pointing camera systems is aimed at the target and a size of the target in an image from each of the variable pointing camera systems is substantially the same; and

controlling the plurality of other variable pointing camera systems based on the parameters for the plurality of other variable pointing camera systems

wherein the mapping data includes:

data regarding the geometric relationship of the camera systems to the scene;

data regarding the relationship between the zoom and the angular field of view for each camera system; and

data regarding the relationship between the focus and the depth of field for each camera system.

29. (Original) The method of claim 28, wherein:
reading parameters of the first variable pointing camera system includes reading mechanical and optical parameters of the first variable pointing camera system; and
determining parameters for the plurality of other variable pointing camera systems includes determining mechanical and optical parameters for the plurality of other variable pointing camera systems.

30. (Original) The method of claim 29, wherein the first variable pointing camera system includes a first pan/tilt camera system, wherein the plurality of other variable pointing camera systems include a plurality of other pan/tilt camera systems, and wherein:

reading parameters of the first pan/tilt camera system includes reading pan, tilt, zoom and focus parameters of the first pan/tilt camera system; and

determining parameters for the plurality of other pan/tilt camera systems includes determining pan, tilt, zoom and focus parameters for the plurality of other pan/tilt camera systems.

31. (Previously Presented) The method of claim 28, further comprising:

storing digitized, time-stamped images from the variable pointing camera systems; and

generating a video image sequence of the target by outputting an image from certain of

the variable pointing camera systems in sequence according to the position of the variable

pointing camera systems around the scene.

32. (Previously Presented) The method of claim 28, wherein determining parameters
for the plurality of other variable pointing camera systems includes:

determining a position of the target within the scene and a size of the target at the
position in an image from the first variable pointing camera system based on the parameters of
the first variable pointing camera system; and

determining the parameters for each of the other variable pointing camera systems based
on the position of the target and the size of the target in the image from the first variable pointing
camera system.

33. (Previously Presented) The method of claim 28, further comprising selecting one
of the other variable pointing camera systems to be the first variable pointing camera system.

34-39. (Canceled)

40. (Currently Amended) A system for servoing on a moving target within a dynamic
scene, comprising:

a plurality of master variable pointing camera systems;

a plurality of slave variable pointing camera systems, wherein the slave variable pointing camera systems and the master variable pointing camera systems are positioned around the scene;

at least one master control unit in communication with each of the master variable pointing camera systems for determining, based on parameters of the master variable pointing camera systems and mapping data for the camera systems, parameters for certain of the plurality of the slave variable pointing camera systems such that, at a point in time, each of the master variable pointing camera systems and the slave variable pointing camera systems are aimed at the target and a size of the target in an image from each of the master variable pointing camera systems and the slave variable pointing camera systems is substantially the same; and

a plurality of slave camera control units, each slave camera control unit in communication with at least one of the master control units, wherein each slave camera control unit is for controlling at least one of the slave variable pointing camera systems based on the parameters for each of the slave variable pointing camera systems,

wherein the mapping data includes:

data regarding the geometric relationship of the camera systems to the scene;

data regarding the relationship between the zoom and the angular field of view for each camera system; and

data regarding the relationship between the focus and the depth of field for each camera system.

41. (Original) The system of claim 40, wherein the at least one master control unit includes a plurality of master control units, and wherein each of the master control units is in communication with at least one master variable pointing camera system and is for determining,

based on parameters of the master variable pointing camera systems, parameters for certain of the plurality of the slave variable pointing camera systems such that, at a point in time, each of the master variable pointing camera systems and the slave variable pointing camera systems are aimed at the target and a size of the target in an image from each of the master variable pointing camera systems and the slave variable pointing camera systems is substantially the same.

42. (Previously Presented) The system of claim 6, wherein the image sequence generator is for outputting images from each of the master variable pointing camera system and the slave variable pointing camera systems according to their position around the scene, wherein the images are from a common point in time so as to generate a 3D stop-motion video image sequence.

43-44. Cancelled.

45. (Previously Presented) The method of claim 31, wherein generating the video image sequence includes generating a 3D stop-motion video image sequence of the target by outputting images from each of the variable pointing camera systems according to their position around the scene, wherein the images are from a common point in time.